

AMENDMENTS

Please amend the application as set forth below.

In the Claims

Cancel claims 1-17 and add the following new claims 18-33.

18. (new) A compound of the formula I



wherein

A denotes a carbonyl or sulphonyl group linked to the benzo moiety of the group Het,

B denotes an ethylene group, wherein a methylene group, linked either to the group Het or Ar, is optionally replaced by an oxygen or sulphur atom or by a sulphinyl, sulphonyl, carbonyl or $-\text{NR}_1$ group, wherein

R_1 denotes a hydrogen atom or a C_{1-6} -alkyl group,

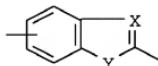
E denotes a cyano or $\text{R}_b\text{NH-C(=NH)}$ - group wherein

R_b denotes a hydrogen atom, a hydroxy group, a C_{1-3} -alkyl group or a group which is cleaved *in vivo*,

Ar denotes a phenylene or naphthylene group optionally substituted by a fluorine, chlorine or bromine atom or by a trifluoromethyl, C_{1-3} -alkyl or C_{1-3} -alkoxy group,

or a thiénylene group optionally substituted in the carbon skeleton by a C_{1-3} -alkyl group,

Het denotes a bicyclic heterocycle of formula



wherein,

X is a nitrogen atom and

Y is an imino group optionally substituted by a C_{1-6} -alkyl or C_{3-7} -cycloalkyl group

and R_a denotes an R_2NR_3- group wherein

R_2 denotes a C_{1-4} -alkyl group, which is optionally substituted by a carboxy, C_{1-6} -alkyloxycarbonyl, benzyloxycarbonyl, C_{1-3} -alkylsulphonylaminocarbonyl,

phenylsulphonylaminocarbonyl, trifluorosulphonylamino, trifluorosulphonylaminocarbonyl or 1*H*-tetrazolyl group, or

a C₂₋₄-alkyl group substituted by a hydroxy, phenyl-C₁₋₃-alkoxy, carboxy-C₁₋₃-alkylamino, C₁₋₃-alkoxycarbonyl-C₁₋₃-alkylamino, N-(C₁₋₃-alkyl)-carboxy-C₁₋₃-alkylamino or N-(C₁₋₃-alkyl)-C₁₋₃-alkoxycarbonyl-C₁₋₃-alkylamino group, whilst in the abovementioned groups the carbon atom in the α -position relative to the adjacent nitrogen atom may not be substituted, and

R₃ denotes a pyridinyl group optionally substituted by a methyl group,

or a tautomer or salt thereof.

19. (new) A compound of the formula I according to claim 1, wherein

A denotes a carbonyl or sulphonyl group linked to the benzo moiety of the group Het,

B denotes an ethylene group, in which a methylene group, linked either to the group Het or Ar, is optionally replaced by an oxygen or sulphur atom or by a sulphonyl, carbonyl or -NR₁- group, wherein

R₁ denotes a hydrogen atom or a C₁₋₅-alkyl group,

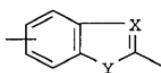
E denotes an R_bNH-C(=NH) group wherein

R_b denotes a hydrogen atom, a hydroxy group, a C₁₋₃-alkyl group or a group which is cleaved *in vivo*,

Ar denotes a phenylene group optionally substituted by a fluorine, chlorine or bromine atom or by a trifluoromethyl, C₁₋₃-alkyl or C₁₋₃-alkoxy group,

or a thiénylene group optionally substituted in the carbon skeleton by a C₁₋₃-alkyl group,

Het denotes a bicyclic heterocycle of formula



wherein,

X is a nitrogen atom and

Y is an imino group optionally substituted by a C₁₋₆-alkyl or C₃₋₇-cycloalkyl group

and R_a denotes a R₂NR₃- group wherein

B1
R₂ denotes a C₁₋₄-alkyl group, which is optionally substituted by a carboxy, C₁₋₆-alkyloxycarbonyl, benzyloxycarbonyl, C₁₋₃-alkylsulphonylaminocarbonyl, phenylsulphonylaminocarbonyl, trifluorosulphonylaminocarbonyl, trifluorosulphonylaminocarbonyl or 1H-tetrazolyl group, or

a C₂₋₄-alkyl group substituted by a hydroxy, phenyl-C₁₋₃-alkoxy, carboxy-C₁₋₃-alkylamino, C₁₋₃-alkyloxycarbonyl-C₁₋₃-alkylamino, N-(C₁₋₃-alkyl)-carboxy-C₁₋₃-alkylamino or N-(C₁₋₃-alkyl)-C₁₋₃-alkyloxycarbonyl-C₁₋₃-alkylamino group, whilst in the abovementioned groups the carbon atom in the α -position relative to the adjacent nitrogen atom may not be substituted, and

R₃ denotes pyridinyl group optionally substituted by a methyl group,

or a tautomer or salt thereof.

20. (new) A compound of the formula I according to claim 1, wherein

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A denotes a carbonyl or sulphonyl group linked to the benzo moiety of the group Het,

B denotes an ethylene group in which the methylene group linked to the group Ar is optionally replaced by an oxygen or sulphur atom or by an -NR₁- group, wherein

*A¹
cont.*
R₁ denotes a hydrogen atom or a C₁₋₄-alkyl group,

E denotes an R_bNH-C(=NH)- group wherein

R_b denotes a hydrogen atom, a hydroxy, C₁₋₉-alkyloxycarbonyl, cyclohexyloxycarbonyl, phenyl-C₁₋₃-alkyloxycarbonyl, benzoyl, p-C₁₋₃-alkyl-benzoyl or pyridinoyl group, whilst the ethoxy moiety in the 2-position of the abovementioned C₁₋₉-alkyloxycarbonyl group is optionally, additionally, substituted by a C₁₋₃-alkylsulfonyl or 2-(C₁₋₃-alkoxy)-ethyl group,

Ar denotes a 1,4-phenylene group optionally substituted by a chlorine atom or by a methyl, ethyl or methoxy group or it denotes a 2,5-thienylene group,

Het denotes a 1-(C₁₋₃-alkyl)-2,5-benzimidazolylene or 1-cyclopropyl-2,5-benzimidazolylene group and

R₄ denotes an R₂NR₃- group wherein

R₂ is a C₁₋₄-alkyl group substituted by a carboxy, C₁₋₆-alkyloxycarbonyl, benzyloxycarbonyl, C₁₋₃-alkylsulphonylaminocarbonyl or 1H-tetrazol-5-yl group, or

a C₂₋₄-alkyl group substituted by a hydroxy, benzyloxy, carboxy-C₁₋₃-alkylamino, C₁₋₃-alkyloxycarbonyl-C₁₋₃-alkylamino, N-(C₁₋₃-alkyl)-carboxy-C₁₋₃-alkylamino or N-(C₁₋₃-alkyl)-C₁₋₃-alkyloxycarbonyl-C₁₋₃-alkylamino group, whilst in the

abovementioned groups the carbon atom in the α -position to the adjacent nitrogen atom may not be substituted, and

B1
R₃ denotes a pyridinyl group optionally substituted by a methyl group,
or a tautomer or salt thereof.

21. (new) A compound of the formula I according to claim 1, wherein

A denotes a carbonyl or sulphonyl group linked to the benzo moiety of the group Het,

B denotes an ethylene group in which the methylene group linked to the group Ar is optionally replaced by an oxygen or sulphur atom or by an -NR₁- group, wherein

R₁ denotes a hydrogen atom or a methyl group,

E denotes an R_bNH-C(=NH)- group, wherein

A'
cont.
R_b denotes a hydrogen atom or a hydroxy, C₁₋₉-alkoxycarbonyl, cyclohexyloxycarbonyl, benzyloxycarbonyl, benzoyl, p-C₁₋₃-alkylbenzoyl or nicotinoyl group, whilst the ethoxy moiety in the 2-position of the abovementioned C₁₋₉-alkoxycarbonyl group is optionally, additionally, substituted by a C₁₋₃-alkylsulphonyl or 2-(C₁₋₃-alkoxy)-ethyl group,

Ar denotes a 1,4-phenylene group optionally substituted by a chlorine atom or by a methyl, ethyl or methoxy group, or it denotes a 2,5-thienylene group,

Het denotes a 1-methyl-2,5-benzimidazolylene or 1-cyclopropyl-2,5-benzimidazolylene group and

R_a denotes a R₂NR₃- group wherein

R₂ denotes a C₁₋₃-alkyl group which is optionally substituted by a carboxy, C₁₋₆-alkyloxycarbonyl, benzyloxycarbonyl, methylsulphonylaminocarbonyl or 1H-tetrazol-5-yl group, or

a C₂₋₃-alkyl group substituted by a hydroxy, benzyloxy, carboxy-C₁₋₃-alkylamino, C₁₋₃-alkoxycarbonyl-C₁₋₃-alkylamino, N-(C₁₋₃-alkyl)-carboxy-C₁₋₃-alkylamino or N-(C₁₋₃-alkyl)-C₁₋₃-alkoxycarbonyl-C₁₋₃-alkylamino group, whilst in the abovementioned groups the carbon atom in the α -position to the adjacent nitrogen atom may not be substituted, and

R₃ denotes a pyridinyl group,

or a tautomer or salt thereof.

22. (new) A compound of the formula I according to claim 1, wherein

A denotes a carbonyl group linked to the benzo moiety of the group Het,

B denotes an ethylene group wherein the methylene group attached to the group Ar is optionally replaced by an -NR₁ group, whilst

R₁ denotes a hydrogen atom or a methyl group,

E denotes an R_bNH-C(=NH)- group wherein

R_b is a hydrogen atom, a hydroxy, C₁₋₉-alkoxycarbonyl, cyclohexyloxycarbonyl, benzyloxycarbonyl, benzoyl, *p*-C₁₋₃-alkyl-benzoyl or nicotinoyl group, whilst the ethoxy moiety in the 2-position of the abovementioned C₁₋₉-alkoxycarbonyl group is optionally, additionally, substituted by a methylsulfonyl or 2-ethoxy-ethyl group,

Ar denotes a 1,4-phenylene group optionally substituted by a methoxy group or it denotes a 2,5-thienylene group,

Het denotes a 1-methyl-2,5-benzimidazolylene group and

R_a denotes an R₂NR₃- group wherein

R₂ denotes a C₁₋₃-alkyl group which is optionally substituted by a carboxy, C₁₋₆-alkyloxycarbonyl, benzyloxycarbonyl, methylsulfonylaminocarbonyl or 1H-tetrazol-5-yl group, or

a C₂₋₃-alkyl group substituted by a hydroxy, benzyloxy, carboxy-C₁₋₃-alkylamino, C₁₋₃-alkoxycarbonyl-C₁₋₃-alkylamino, N-(C₁₋₃-alkyl)-carboxy-C₁₋₃-alkylamino or N-(C₁₋₃-alkyl)-C₁₋₃-alkoxycarbonyl-C₁₋₃-alkylamino group, whilst in the abovementioned groups the carbon atom in the α -position to the adjacent nitrogen atom may not be substituted, and

R₃ denotes
a 2-pyridinyl group,

or a tautomer or salt thereof.

23. (new) A compound selected from the group consisting of:

(a) 1-Methyl-2-[N-(4-amidinophenyl)-aminomethyl]-benzimidazol-5-yl-carboxylic acid-N-(2-pyridyl)-N-(hydroxycarbonylmethyl)-amide,

(b) 1-Methyl-2-[2-(2-amidinothiophen-5-yl)ethyl]-benzimidazol-5-yl-carboxylic acid-N-(2-pyridyl)-N-(2-hydroxycarbonylethyl)-amide,

(c) 1-Methyl-2-[N-(4-amidinophenyl)-aminomethyl]-benzimidazol-5-yl-carboxylic acid-N-(2-pyridyl)-N-(2-hydroxycarbonylethyl)-amide,
(d) 1-Methyl-2-[2-(4-amidinophenyl)ethyl]-benzimidazol-5-yl-carboxylic acid-N-(2-pyridyl)-N-(2-hydroxycarbonylethyl)-amide,
(e) 1-Methyl-2-[N-(4-amidinophenyl)-N-methyl-aminomethyl]-benzimidazol-5-yl-carboxylic acid-N-(2-pyridyl)-N-(2-hydroxycarbonylethyl)-amide,
(f) 1-Methyl-2-[N-(4-amidinophenyl)-N-methyl-aminomethyl]-benzimidazol-5-yl-carboxylic acid-N-(3-pyridyl)-N-(2-hydroxycarbonylethyl)-amide and
(g) 1-Methyl-2-[N-(4-amidino-2-methoxy-phenyl)-aminomethyl]-benzimidazol-5-yl-carboxylic acid-N-(2-pyridyl)-N-(2-hydroxycarbonylethyl)-amide,
or a prodrug, double prodrug or physiologically acceptable salt thereof.

24. (new) 1-Methyl-2-[N-(4-amidinophenyl)-aminomethyl]-benzimidazol-5-yl-carboxylic acid-N-(2-pyridyl)-N-(2-hydroxycarbonylethyl)-amide or a prodrug, double prodrug or physiologically acceptable salt thereof.

25. (new) 1-Methyl-2-[N-(4-amidino-2-methoxy-phenyl)-aminomethyl]-benzimidazol-5-yl-carboxylic acid-N-(2-pyridyl)-N-(2-hydroxycarbonylethyl)-amide, or a prodrug, double prodrug or physiologically acceptable salt thereof.

26. (new) 1-Methyl-2-[N-[4-(N-n-hexyloxycarbonylamido)phenyl]aminomethyl]-benzimidazol-5-yl-carboxylic acid-N-(2-pyridyl)-N-(2-ethoxycarbonylethyl) amide or a physiologically acceptable salt thereof.

27. (new) A physiologically acceptable salt of a compound according to claim 18, 19, 20, 21 or 22, wherein E denotes an $R_b\text{NH-C(=NH)-}$ group.

28. (new) A pharmaceutical composition containing a compound according to claim 18, 19, 20, 21, 22, 23, 24, 25 or 26, wherein E denotes an $R_b\text{NH-C(=NH)-}$ group, or a physiologically acceptable salt thereof, together with a pharmaceutically acceptable carrier or diluent.

29. (new) A method for preventing or treating venous and arterial thrombotic disease which comprises administering an antithrombotic amount of a compound according claim 18, 19, 20, 21, 22, 23, 24, 25 or 26, wherein E denotes an $R_b\text{NH-C(=NH)-}$ group, or a physiologically acceptable salt thereof.